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AUTHOR Davis, Buddy
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ABSTRACT

Virtually every profession has adopted a special vocabulary and style of communication which tends to be incomprehensible to persons outside the profession. The special vocabularies serve the professions well--until it comes time to communicate with "outsiders." Then, the professional jargon must be translated into "universal English." In this publication, the author provides both the general citizenry and professional educators a nontechnical explanation of the concept and total program of accountability in Florida education. The presentation includes such topics as needs assessment, pupil assessment, accreditation, and comprehensive planning. (Author/JF)

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# articles on educational accountability in universal english

EA 006 415

**Revised**
**February 1973**

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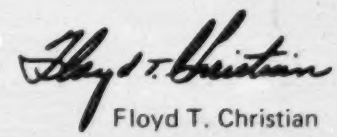
# translating to "UNIVERSAL ENGLISH"

Virtually every profession has adopted a special vocabulary and style of communication which tends to be incomprehensible to persons outside the profession. This is true for architecture, for medicine, for law, for physics, for music, for computer technology, and for education. The special vocabularies have benefitted members of each profession by simplifying communication regarding conceptual nuances and technical distinctions.

The special vocabularies serve the professions well—until it comes time to communicate with "outsiders." Then, the professional jargon must be translated into "universal English." The translator has an exceptionally difficult job, because many professionals feel that their carefully honed ideas have been violated when removed from the rigorous protection of their special vocabulary. However, in education and other public service professions, we have no alternative. The concepts and ideas which guide professional activities must be released from their shelter and allowed to compete for survival in the larger society, the arena where professionals serve.

In this publication we have allowed the sunshine of "universal English" to illuminate some of the newer ideas and activities in the Florida Department of Education. The "translator" is Buddy Davis, Professor of Journalism, University of Florida and Pulitzer prize-winning editorial writer for the Gainesville Sun.



Floyd T. Christian

# a debt to ASCLEPIUS

Editor's Note: The Florida Department of Education defines accountability as "the process of explaining the utilization of resources in terms of their contributions to the attainment of desired results." In other words, accountability calls for reports on results achieved and reports on the resources expended in achieving those results.

This article describes conditions which led to the current concerns for accountability. It also reflects on current and proposed activities to foster accountability.

"I owe a cock to Asclepius; will you remember to pay the debt?" Socrates was on his death bed when he remembered his debt to Asclepius. With his final words, Socrates still was a teacher-by-example, unashamedly claiming responsibility for a commitment honestly made.

Florida public school teachers and their educational colleagues for decades have fulfilled their own honest commitment to serve Florida's children. Their success is legend--written in the annals of science, art, business and other fields of human endeavor.

*But today, education is between a rock and a hard place.*

This is a dilemma partly of the educators' making, because they did such a good job. Educators are victims of their own success. They had a hand in creating an explosively expanding society—which put in every living room the image of men walking on the moon. Our pupils of 20 and 30 years ago have created a world of mind-boggling complexity—cities dying of their own bulk, like dinosaurs; a bomb with globe-splitting capacity; air pollution dense enough to sweep across continents; radioactive wastes which defy destruction.

Equally complex are human relations, the fragile threads which hold society together. The developing awareness of minorities. The assertion of women's rights. The intricacies of international diplomacy. The enlargement of the political processes.

These are **challenges,** different only in immensity from the challenges of the past. Educators in Florida and elsewhere must respond with the same spirit and sensitivity of the past. But the effort will be **more** demanding because the challenges tower over us like King Kong in Disneyworld.

*In the past, the oft-applied solution was money.*

New money, as an educational resource, is rapidly getting scarce—both in Florida and nationwide. In 1943, about two percent of the Gross National Product went into education on all levels. In 1971, it was eight percent. At the current rate, authorities predict it would reach thirty percent in the year 2000 and 100 percent in 2080.

This is an impossibility.

The dollar demands of education must be weighed beside the dollar demands of criminal justice, environment, welfare and health. Taxpayers grow impatient, lawmakers grow impatient, and educators should grow impatient with the reflex philosophy that money will solve **every** problem.

*Education is faced with a wringing out.* Not only must education meet its challenges within the current percentage of the tax dollar, but it must convince others that it is selling the steak and not the sizzle.

Educators of the future must **teach** better and **manage** better to meet modern challenges with a decreasing share of **money**. This is hard reality.

*· So education is between a rock and a hard place. ·*

*· Florida is preparing to split the rock. ·* The Department of Education is developing a fresh approach, an approach based on a philosophy of constructive change. The Legislature in the past few years has enacted the fresh approach into law.

It is called **accountability**.

*As a basic idea, accountability is not new.* Educators over the years have been accountable for warm bodies in computing average daily attendance, for typewriters and slide projectors, bicycle racks and water fountains and hot lunches. This far from exhausts the list of accountable items which, when strayed or stolen, nibble at the educator's day like mice at ripe cheese.

This accountability has much to do with materials and budgets. We have reliable methods of measuring it. It feels comfortable, like a favored pair of bedroom shoes. Our tendency is not to question it, because it is warm and familiar.

*But the old accountability deserves questioning, because it concerns only what goes* **into** *education.*

*The new accountability is concerned with what comes* **out** *of education.*

The new accountability is not thing-centered, but **student-centered.** It deals with skills, grasp, adjustment, accomplishment. And it is not established by an edict from the State Capitol, but by the teacher in the classroom.

In the past, the school system was merely **administered** by bringing together the people and the tools. With accountability, the school system must be **managed** by:

*(1) setting goals,*
*(2) pinpointing needs,*
*(3) laying out a course of action,*
*(4) organizing the materials,*
*(5) doing the job,*
*(6) evaluating the results, and*
*(7) revising when necessary.*

The most meaningful management is down-shifted to the classroom, to the student-teacher level, where it ought to be. *The teacher is freed to innovate and individualize, and try again if things don't go right.* But the planning and self-evaluation philosophy does not stop there. It prevails throughout the system, so it affects everybody in Florida public education.

Accountability is possible only under certain conditions.

The "no-no" restraints imposed by the state must be relaxed with meaningful control restored to the local school system. The Florida Legislature has done that.

*The true measure of education must be recognized as* **student** *performance, not in number of dollars or water fountains* Tools and techniques to evaluate performance are available and are being further refined.

Some educators view accountability with suspicion and distrust. They see it as Big Brother snooping into the classroom. They consider it a dehumanizing check on job performance. Unfortunately, legislatures in some other states have adopted punitive laws which would do just that.

But this is not Florida's way.

In Florida, district educators will set their own objectives consistent with state goals, decide how best to reach them, marshal the resources to do the job, evaluate the results and make improvements based on experience. Each at different tasks, the school board will do it, the district staff will do it, the principals will do it, and the teachers will do it. The process enhances the independence and dignity of the teaching profession. It improves the learning environment. *It focuses on the student.*

The state is not Big Brother. It is limited to (1) sketching educational goals in broad outline in terms of minimums which society expects and (2) helping provide the tools and the techniques. *The day of drinking fountain accountability is over.*

But there is no evading the additional **responsibility** placed upon teachers and staff. They must know the state of the art and use it. They have an obligation to innovate and show results. Like medical doctors, educators must keep abreast of latest research and methods—and use them. Also like doctors, their creativity must be soundly based—for no doctor will tell a patient that he feels creative today and will remove the appendix through the esophagus.

And, like doctors who commit their talent to every patient regardless of status or wealth, educators must commit their talent to all who present themselves for learning.

*Accountability in Florida education is not working harder, but working smarter.*

This is Florida's formula for meeting what some call the crisis in education. It is a nationwide crisis, and some states are meeting it with rigid controls of punitive impact. Others may be groping for a solution. But Florida is adroitly inserting accountable management, a systematic and system-wide way of honoring a commitment to children as Socrates honored his commitment to Asclepius.

It is Florida's way to **teach** better and **manage** better to meet modern **challenges** within education's share of **money.**

The tools and techniques will be in constant refinement.

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# articles on statewide activities conducted in cooperation with local districts

Editor's Note: In order to carry out its mission, the Department of Education must be thoroughly informed about aspects of society and must identify the needs of all citizens of the State. School districts have a similar responsibility for knowing the needs of their constituents.

"Needs assessment" is the process for finding out about those needs. The Department has developed a needs assessment information system. Local school districts are developing parallel systems. This article tells what "needs assessment" is all about.

## NEEDS ASSESSMENT IS LIKE CHECKING THE GAS GAUGE

A need is a discrepancy between what is and what ought to be—like the fellow who is walking down the highway with a gasoline can when he ought to be 50 miles up the road.

That's a very clear-cut example of a **need.** But in the delicate human relationship involved in education, the assessment of a need is considerably fuzzier. And the main problem is that we all jump to conclusions.

Consider the headache. Most of us open the medicine cabinet in search of aspirin. That's a solution which works most of the time, but it is jumping to a conclusion. If the real problem is a brain tumor, aspirin is the wrong solution altogether.

Jumping too quickly from need-to-solution is a regular happening on the American scene. And it sometimes has far-reaching reprecussions, like when the nation believed Prohibition would solve alcoholism—but it didn't.

We jump to other quick solutions to fill needs—like more police will reduce crime, like smaller classes will improve teaching. These may

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be true in certain places at certain times, but they certainly are not universal remedies.

So Needs Assessment is much more than keeping the gasoline tank full.

*Needs Assessment is putting a specific problem under a microscope until the problem is plainly identified.* Needs Assessment is the diagnosis, not an aspirin.

Comprehensive Planning will put Needs Assessment in the spotlight. Planning requires establishing of goals and objectives. And this cannot be done without diagnosing **needs**.

Garden variety research methods are used in assessing needs. This includes surveys, evaluation by experts, questionnaires, testing, the use of existing statistics. And while it has little mystique, measuring needs takes expertise—like gardening.

The Department of Education will be unable to refine needs enough to suit the requirements of the 67 districts. Only the districts can do that refinement, so they will be assessing their own needs.

Some school districts already have contrived their own satisfactory method of assessing needs. Others will want help, or the choice of alternative methods, and the Department of Education will offer its resources. A model for assessing district-level needs may be developed from the Department of Education's current statewide program.

Someday needs assessment will be routine in all school districts. But, at the outset, there's plenty of ground to be broken. The districts will need a body of information to establish a norm and to find out how they measure up to the norm. They will need new tools, fresh expertise, and assistance in putting the package together.

With such tools, the districts can measure their needs by comparing present status with long-range goals and thus establish objective priorities. *The Needs Assessment is a vital part of the process because it represents reality.*

Assessing needs is like a periodic check of the gasoline gauge. It pays off.

An automobile manufacturer who wants to evaluate his product sends it out on a grueling road test. Educators are more fortunate. Their end product can talk back. So the educator does not have to wait for the product to break down to determine its usefulness. The educator can ask questions.

But a road map helps.

The educational road maps tells us where we are and helps us decide where we want to go.

And that describes pupil assessment.

As a direct aid to classroom teachers, principals and districts, the Department of Education is developing catalogs for pupil assessment. These catalogs offer a variety of learning objectives, any of which can be selected or modified, and testing methods to determine if the students get the message.

Editor's Note: The assessment of pupil learning is a major element in the strategy for educational change being supported by the Department of Education. This article describes the rationale for pupil assessment. It also discusses the statewide assessment program administered by the Department of Education as required by law.

## PUPIL ASSESSMENT, THE EDUCATIONAL STETHOSCOPE

Developing catalogs is a very tough task which takes time and expertise. The Department of Education has contracted for the development of catalogs in the following areas: communication skills, science, math, art, and certain vocational areas—psychomotor skills, social studies, health education, music and human relations.

Why bother?

Well, Pupil Assessment is an educational stethoscope of most use to the teacher. It helps diagnose the rate of learning of the individual student. It suggests alternate means of reaching the students. *It enables the teacher to do a better job.*

Pupil Assessment helps the district also, but not in such a personal sense. *By indicating weak areas, it may call for a shift in funding.* Some of the data will be helpful in reporting accountability to the state, as required by law. But that is not the real purpose of Pupil Assessment. Its purpose is to help the district, the principal, and especially the teacher to plot a path, head in the right direction, and find out how far they got.

Meanwhile, the state will be doing a bit of stethoscoping itself.

The Department of Education, under legislative mandate, will be conducting statewide pupil assessments. The aim is not to determine how Sue and Sam are doing individually, or how East Loincloth High is performing, but how the **district** is fulfilling its objectives. So state level reporting is not in terms of individual student scores, but rather in percentage of students in the district who attained objectives.

The feedback is important. *It will prevent pouring resources into problems which already are licked.* Statewide Pupil Assessment will pinpoint **needs**, on which energy, time and money can be expended profitably.

And it will serve much the same function for the Legislature. The Commissioner of Education is required by law to report student achievement in each school district. This should be of immense help to legislators and the public who set the ultimate priorities.

The adoption of new Pupil Assessment does not mean the discard of other types of important testing, such as Florida Twelfth Grade or national standardized tests. These still are needed, not only because they meet college entrance requirements, but because some of them reveal how **Florida** students stand against **national norms.**

How far along is the state administered pupil assessment?

The Department of Education is designing and producing the tests and establishing procedures for administrating them, scoring, making the statistical analysis and reliability studies, and interpreting the results. The priorities and objectives in each assessment area are recommended by:

(1) state advisory councils with lay participation,
(2) curriculum specialists, and
(3) the advice of numerous teachers.

Technical refinements are by the staff of the Department of Education. The final selection of objectives for state assessment is the responsibility of the State Board of Education.

In 1972, a statewide sample of pupils in grades two and four were tested on skills related to reading. In 1973, tests will be given to a statewide sample in grades three, six and nine, on reading, mathematics, and writing.

This does not mean statewide pupil assessment is perfected. The short time available has not permitted that.

However, pupil assessment at all levels is here to stay in Florida.

It is a refining tool—whether in the classroom only, school-wide, district-wide or statewide. It will permit the teacher, the principal, the district and the Department of Education to zero in on problems which, sometimes, are very different.

*The promise of Pupil Assessment is that it will tell us if we are hitting the target we selected.* It will give us the incentive to improve. It will pinpoint our needs and justify a call for help.

Pupil Assessment is like a shipboard radio. It can broadcast the progress of the educational journey. And it can send an SOS.

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Editor's Note: Accreditation is the process whereby schools are evaluated to determine whether they meet prescribed standards. This article describes a basic change in standards for State accreditation.

## ACCREDITATION WITH A NEW MEASURING STICK

A square foot never taught anybody anything.

But, for years, we have given the square foot very respectful attention. The same with libraries. Teaching aids. The ratio of students to faculty. Administrative support. Hours of instruction available. Teacher preparation.

These have been historic factors in school accreditation. They are tangible, easily tallied, and objective. They were the best measuring stick available.

*But* **facilities** *are not the same as* **student achievement.**

Call it quality control, if you like, but every good enterprise has it, even if the building is spacious, clean and well-staffed. Square footage does not produce the automobile or the student. So in schools, the staff and physical facilities may deliver the groceries, but we have to look inside the bag to discover if it's cabbage or caviar.

And we are getting the educational tools for that peek inside the bag.

When these tools are perfected, student achievement will be the measuring stick for accreditation. It will take a while, but it's coming.

The new method of accreditation will be phased in gradually over the next several years. Florida already has made a start. Today, school districts are offered three methods of accreditation, and they must choose at least two. These are:

*The Status Standard,* which is the traditional method of evaluating the physical plant and the teacher-student ratios and the like.

*The Process Standard,* which is an assessment of the teaching environment and the methods of instruction—ranging from scheduling of classes to grouping of students to use of such aids as television.

*The Product Standard,* which is the measurement of student achievement. And certainly this is the most definitive means of establishing accreditation.

Why is student achievement so much better as a measurement?

It's the philosophy of the thing which is so important. Old-fashioned accreditation depends on a regulatory manager to lay down the do's and to exert negative pressure to issue the no-no's. And there is stress on material goods which, if improperly used, may have little to do with student achievement.

But if accreditation is based on student achievement, then it is getting down to where the action is—on the student learning level. Student learning is the regulatory manager. *And the philosophical stress shifts from the square foot to teaching.*

The evolution of accreditation standards is important to education. It leans away from regulation and inspection. It moves toward intellectual development, toward the student. *After all, if a student performs well, who cares about the number of classrooms or volumes in the library?*

Why will it take more time to perfect a meaningful accreditation system based on student achievement? A realistic handicap is the need for financing and staffing in this very sepcialized area. But another reason is the need to establish minimal standards, which is really the determination of expected student compe-

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tence at various levels. That will take time, and the help of educators and parents and students out in the districts.

*The hazard of a minimal standard, of course, is that it tends to become the maximum—that districts will rest on their oars, having attained the minimum.* That, we all must guard against by providing incentives for excellence and by offering options appropriate for the districts and consistent with society's goals.

Disaccreditation is a cry for help. And the Department of Education responds with technical advice and support to help the district define the problem.

Accreditation on the basis of student achievement will not change that, but it certainly humanizes the problem. *The emphasis shifts from fallen plaster to student achievement.*

And that is an important shift indeed.

**Editor's Note: It was said earlier that "Accountability in Florida education is not working harder, but working smarter." "Working smarter" requires a sound base of information for making decisions. This article discusses the information gathering system developed by the Department for vocational, technical and adult education.**

## THE VOCATIONAL-TECHNICAL MODEL FOR INFORMATION GATHERING

The early astronauts were electronically wired for a running account of their physical health—temperature, respiration, water loss, pulse, and bodily chemical balance.

*If education could be wired that way, measuring performance and results would be no problem at all.*

Measurement isn't that easy in education, but it must be done. It is especially important in the vocational-technical areas, because these are career-oriented. If students cannot perform skills acceptably, the repercussions are immediate.

The idea is to fine-tune the job capability of students.

That is why the Department of Education has a structured system of evaluation. It reaches all levels—the fellow who does the hiring, the teacher, the student. And since accountability of the districts will be firmly based on evaluation, the three-part Voc-Tech structure deserves a look.

A State Advisory Council makes a running assessment and recommends changes. The council has contracted with an independent third party for an annual evaluation of vocational programs, services and activities.

A Management Information System keeps tabs on courses, facility use, fiscal management, and even the enrollment of individual students and job placement. This system was installed in all 67 districts in 1972 and should provide teachers and administrators an easier and more systematic procedure for reporting data.

By finding out what employers **want** compared to what students **offer**, drawing up objectives and measuring results and field testing, the Department will help districts evaluate the efficiency of their Voc-Tech programs. In 1973, catalogs of objectives for assessment will be available in such areas as ornamental horticulture, typewriting, and automotive mechanics.

Voc-Tech is not the only model for information gathering in the districts, but it hints at the scope of the job ahead. By servicing a single specified area, it becomes a **think** model for the ingredients which go into a full measurement system.

For educators, Voc-Tech can teach more than Voc-Tech.

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# articles on district activities

Editor's Note: The State of Florida is gradually adopting a new strategy for improving education; namely, to provide greater flexibility to those who operate educational programs and, at the same time, make them accountable for the results. The revision of the school code and State Board of Education Regulations to remove constraints and the District Comprehensive Planning requirement, enacted by the 1972 Florida Legislature is a clear example of this strategy.

## COMPREHENSIVE PLANNING, THE NEW BOY IN THE BLOCK

It takes a while to get acquainted with the new boy on the block. And when that boy is a whopper like Comprehensive Planning, the neighborhood pecking order is bound to change. That is precisely what Comprehensive Planning did to the Department of Education and the 67 school districts.

Over the years, the Legislature and the Department of Education have relaxed their **regulatory role** over the districts. Now, the State and the district are **partners**.

The device used is simple. *To receive state funds, the districts must submit each year an overall comprehensive plan covering at least five years and which includes a detailed annual plan for the upcoming year.* These are to be consistent with goals established by the State Board of Education.

And the districts must maintain an ongoing systematic **evaluation** of needs.

The role of the Department of Education is to review these district plans and make recommendations to superintendents and school boards.

No use minimizing the result of this far-reaching legislation. The impact on district school systems is radical in the best sense of the word, because it establishes a **freedom of choice, opens alternatives, and encourages change**. The ramifications are two:

*Let's consider flexibility first.* The districts are to undertake **strategic planning**. This is not a sheaf of paper to be fastened together and shelved. Instead, it is a continuing process—an effort to point up the gap between the district's (1) hopes or goals and (2) its achievements.

Upon strategic planning is based policy decisions which establish the priority for time, space, materials, personnel and money.

A motorist planning a long trip does much the same thing. He packs clothes and money for the journey, secures maps and details of road conditions and even weather in mountainous areas. He plots a route and keeps his materials at hand. Along the way, he makes the priority decisions as to where to spend his time and money. He has a goal, and everyday he checks off his mileage achievement.

But the motorist has flexibility because **he** did the planning, **he** makes the policy decisions, **he** picks the alternative routes.

School districts now enjoy that same flexibility of planning. *But planning is a flabby character. Planning never laid a brick, hired a specialist, bought a teaching aid, or taught a class.*

*Planning can be a lazy egg.*

The planning must be put to work. This means the marshaling of the district's resources to transfer the plan from paper to reality. After all, that motorist did not get very far unless he packed up, cranked up, gassed up, and moved out.

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How do the districts know they're chugging up the correct highway?

That is where accountability comes in. Like the Florida highway safety campaign, accountability is to "Arrive Alive." Accountability was accomplished by the motorist as he kept track of route signs and checked off the mileage and arrived safely on time. School districts do much the same thing.

They prove accountability by establishing clear goals and objectives, then periodically documenting the progress they've made. Actually, the districts are identifying needs and measuring results—hoping each time to be a notch closer to the pre-set goal.

District Comprehensive Planning deals with:

(1) setting goals which are good
(2) finding out how things now stand and thus establishing the need or distance to the goal,
(3) putting together the resources and people to close the gap,
(4) doing the job,
(5) evaluating the results, and
(6) trying something new if it didn't work as well as we wanted it to the first time.

What is likely to be the real benefit of Comprehensive Planning? Well, the motorist enjoys his journey more if he makes his own choices, like picking a vacation route. School districts, by setting their own targets, should be encouraged to make their programs more effective and productive.

*And what is the role of the Department of Education?*

*It will articulate objectives, establish highest priority for given time periods, establish minimum standards and quality control, provide consultants, spread information, and provide incentive for districts to exceed minimum performance.*

Comprehensive Planning, the law and the concept, are new to Florida. It will take a while to adjust to this new boy on the block. So the school districts and the Department of Education are in transition. The journey ahead is not a quick day trip, and we will miss some signposts.

We have to develop new tools, including methods to measure student and teacher performance. We have to develop expertise at thinking big, so the goals will be worthwhile. We shall have to learn to assess progress toward objectives, so we will know when they are attained.

The Department of Education will help all it can. District and state personnel have formed a partnership and are busily engaged in carrying out the intent of the law with the tools at hand.

There is little cause for apprehension in the event of a few early blunders. The new boy on the block is a whopper. But he is a **partner**, not an **adversary**.

**Editor's Note: The success of virtually any educational change is dependent upon the ability of local personnel to carry it out. Changes associated with accountability are no exception. This article discusses the State policies which support local inservice teacher education programs, the keystone of successful educational change.**

## INSERVICE TEACHER EDUCATION, A PIPELINE FROM THE PIERIAN SPRING

Alexander Pope said to drink deep from the Pierian spring, because a little learning is a dangerous thing.

Florida school teachers do not wander far from the waters of learning, because state certification requirements keep them on the track of knowledge. Few professions are more demanding, because teachers must pursue learning to keep their credentials current.

One way is to return periodically to the university campus, and many teachers do that.

In virtually all states, obtaining Inservice Education is deemed an obligation of the individual teacher. *Florida has a different and innovative philosophy, that the district school board is obligated to meet the needs* **of that district** *by providing Inservice Education for its teachers.*

The State of Florida views Teacher Inservice Education as a justifiable use of "company" time and expense—just as big industries do.

The reason is simple. The teacher is in direct contact with the student and has the greatest impact of any element of the school system. To discuss bettering education, without great stress on upgrading teaching skills by sophisticated on-job learning, is like a sounding brass or a tinkling cymbal.

But let us go one step further. Skills which are most valuable for classroom use are being identified. These are called competencies, having to do with classroom **performance**, and they may range from diagnosing pupil learning, to techniques for motivating individual learners, to methods for reporting to parents. A performance-based approach to teacher education assures the teacher that the time spent in inservice programs is well spent.

The Florida system of Inservice Teacher Education does these important things:

*Puts teachers on the center stage as the most important ingredients of the educational system.*

*Stresses* **local** *problems and needs and provides the know-how to solve them.*

*Yields more in the way of useful techniques than the theoretical learning in universities and colleges.*

*As a pipeline directly to the district door, it is a convenient delivery system for new teaching techniques and concepts.*

*Encourages the concept of performance-based teacher education, which assures the introduction of new skills in the classroom.*

Florida law places high priority on Inservice Teacher Education. But that is merely technical, compared to the obvious fact that Inservice Education improves the quality of teaching and is a key element in educational accountability.

Naturally, the Department of Education does all it can to encourage Inservice Education. The most direct assistance is to the individual teacher, since on-job learning is credited to extension of the teacher's certificate. This is merely a practical incentive which is no substitute for a teacher's instinctive thirst for improvement.

But the state also provides help to the school districts. It offers technical help in planning an inservice program, on-site visiting teams, and evaluation of master plans. Sixty-five of the 67 counties have officially approved Inservice Education programs, which reveals the surge of on-job learning in Florida.

What is Inservice Teacher Education? It is a pipeline from the Pierian spring.

# articles on developmental support from the department of education

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Editor's Note: The State's leadership role in education requires new techniques and products. For this reason, the Florida Statutes provide for a State Educational Research and Development Program to support the development of new capabilities. This article discusses that program. The subsequent articles comment on some of the products and techniques under development.

## RESEARCH AND DEVELOPMENT SEEKS BETTER WAYS

Airlines don't ticket passengers for jet liners which have never flown. If they did, the ride could be pretty rough.

Florida students are in for a rough ride, also, unless the educational system accepts improved spare parts, adapts its flight plans, keeps track of costs, updates the repair manuals, field tests its theories, and seeks better ways of keeping things moving.

And that is the job of Research and Development.

Research and Development is simply a support activity. It helps the Department of Education develop its theories and managerial methods, but the major thrust is to devise better tools for the 67 school districts. Its aims are:

*To discover better methods of doing the job of teaching.*

*To figure out ways to measure learning and thus discern the results of teaching.*

That is radical simplification of Research and Development's mission. Some of its work is rather obvious—like producing a film to explain recent education developments. But it also includes instruments for pupil assessment and cost analysis, as well as the development of new kinds of teacher training materials.

*But ideas, sheer ideas, are Research and Development's biggest bag.* Its greatest thrust has been to produce catalogs to:

*(1) set forth teaching objectives which educators can opt to follow, and*
*(2) provide methods to determine if the students got the message.*

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The catalog is an entirely new product of the Department of Education, and the first one was delivered in the 1972-73 school year. It deals with middle school science. Others are coming, on communication skills like reading and writing, art education, drug education, and employability skills.

The catalogs, of course, are a key part of accountability in education and will be available to the districts as each one rolls off the press. Other innovations may be less tangible and harder to deliver to the classroom.

Delve deeper into Research and Development and the complexity of its task becomes more obvious. Examples:

How can parents and students best be drawn into helping make decisions regarding education?

How can the old measurement of quality—like square feet of space and hours of classwork—be augmented with more meaningful measurement like student achievement?

Questions like these are not answered overnight, and Research and Development doesn't expect to. Besides, it has a very modest budget and has to use the rifle instead of shotgun approach to educational problems and innovations. *It zeroes in on the important things.*

These matters ultimately will have impact on Florida education, although the work-in-progress is largely unseen. But education will not go far without Research and Development, anymore then the jet liner could fly safely without the massive backup research on engines and airframe, on the metals of its skin and its pneumatic gear, on pilot training and the weather ahead.

The airline passenger does not see such things, but he would be in a pickle without them. And so it goes with Research and Development. Florida education would be in a pickle, too, if Research and Development was not out in front—like early-warning radar.

Editor's Note. This article discusses one of the projects being carried out under the Educational Research and Development Program. When used, the Resource Analysis System incorporates cost analysis techniques and pupil assessment techniques developed in other projects.

## A RESOURCE ANALYSIS SYSTEM PUTS IN PLAIN VIEW

Department stores sell a divided tray which is called a desk organizer. It keeps the rubber bands separate from the paper clips and the pencils separate from the postage stamps.

The desk organizer puts resources out in plain view.

Resource Analysis does pretty much the same thing for educators. With close up research, it puts a magnifying glass to the five important educational ingredients—*time, space, personnel, material and instructional methods—and relates these to costs.*

Take time, for example. It is education's most expensive ingredient, because salaries and related expenses take 87 percent of the education dollar nationally. The money buys time. Most of it is used fruitfully in beneficial ways. But some of it is used unfruitfully, like waiting for the mimeograph, carrying messages, searching for misplaced material, and filling out unnecessary forms.

*Students have vested interest, too. While their time comes free, time-slippage is a missed chance for learning.*

Another example. Driver training is an expensive one-on-one teaching. But with a driving range costing $30,000, one instructor can teach eight students at once—and do it better.

*The purpose of Resource Analysis is to come up with better ways of doing things.* It aims to conserve money, save time, place skilled

personnel in the right spot, and utilize space so that every desk stays warm.

Resource Utilization can be applied to classrooms, courses, disciplines or schools. The budget can remain the same—while the resources are more effectively used.

A classroom teacher, for example, can choose among a variety of teaching methods. Resource Analysis helps weigh the alternatives and pick the best available for the purpose at hand.

This is precisely the nature of an analysis system which the Department of Education will make available in the 1973-74 school year. It is a system which will encourage teachers to *analyze course objectives, weigh the alternatives, pick the devices, and use the techniques which are best.* The system is adaptable for individual teachers or teams, for traditional or innovative schools. And a teacher can use the system without calling on consultants.

Resource Analysis is not to be taken lightly, although it calls for no district paperwork or reports to the state. *Resource Analysis is one of the three legs to the stool called accountability. Along with Pupil Assessment and Cost Analysis, it comprises the accountability package.* It is part of the continuous flow of decision making—from picking the objective, to deciding on method, to choosing the best tools, to computing the cost, and then to venturing out, followed by assessment and revision.

For the Department of Education, Resource Analysis is a new function—more like a bud than a flower. But it will bloom in time and provide the school districts with manuals and self-instruction.

When vests are in style, men discover the joy of multiple pockets valuable for organizing their resources. That is what Resource Analysis will do for education.

Editor's Note: Concern over costs is a driving force in the accountability movement. Therefore, a Cost Analysis Management Information System is essential. CAMIS is such a system, designed for use by local school districts as they account for their expendtiures.

## CAMIS TELLS WHERE THE DOLLAR GOES

This is about the dollar, and where it goes.

Each state has its own particular way of financing schools, so no cookbook from Washington can be adapted for all systems. But Florida school districts are enough alike to figure costs on the same system. The Department of Education has contrived a system to do the job.

And CAMIS is open ended.

The Cost Analysis Management Information System enables the school district to collect the dollar information needed for federal and state reports. That is the floor of CAMIS. Upon it, the school district can build a framework to suit its purposes. All the district has to do is to add more data.

It is an individualized approach to school financing. It encourages school districts to contrast costs, to project costs of new proposals, to advise individual teachers on costs. In short, CAMIS is expandable for local purposes.

Of course, CAMIS unveils the summary dollar figures necessary for reports to the state. But the bulk of the data is left at home. This means the Capitol dome is not festooned with red tape, and the districts save time and money.

An accountant will feel at home with CAMIS because it embraces the accounting system used almost universally. It is compatible with national and state systems, but can provide far more information for the district. With this information, the districts can choose to:

- *Predict the cost of a new offering.*
- *Figure cost of any subject area or grade level.*
- *Contrast the cost of one teaching method with another.*
- *Couple CAMIS with other measurements, such as Pupil Assessment and Resource Analysis, and evaluate the efficiency of instruction.*

CAMIS has been 18 months in the making. It has been reviewed by a committee of district business managers, discussed at professional meetings, and circulated to the districts in draft form. It is operative in Alachua, Broward and Monroe counties on a trial basis, with some revision anticipated.

Within five years, the Florida Department of Education hopes all public school systems will be using the Cost Analysis Management Information System to take meaningful looks at instructional endeavors and project proposals. It makes for good planning.

Before this is accomplished, *the districts must first isolate the areas of analysis—whether units, courses, projects, programs, or entire schools. Once this is done, the manual sketches the method of providing the cost figures.*

The CAMIS concept is the future. But the manual is waiting on the district shelf.

Editor's Note: The supplementary Cost Analysis system described in this article is designed to supplement CAMIS (discussed in previous article) or any other accounting system. It is being designed for obtaining detailed cost information on a limited program, when it is not feasible to obtain such information through the regular accounting system of the school district or institution. The system is currently being refined in pilot schools cooperating with the Florida Educational Research and Development Program.

## DO-IT-YOURSELF COST ANALYSIS

Supplementary Cost Analysis comes with a do-it-yourself kit.

Suppose a school district wants to contrast the costs of conventional and computer-assisted instruction. Or establish the cost of a laboratory course, like chemistry. Or put a dollar piggy-back on an experimental course.

*All it needs is the do-it-yourself kit.*

Supplementary Cost Analysis is designed to isolate a single block of a school program, determine the allocation of people and material, and translate all the variables into dollar cost. The process is very simple and easily understood and can be accomplished with the aid of district fiscal officers. *It can span one unit, one term, or one objective.*

Supplementary Cost Analysis is especially valuable, of course, when coupled with an Independent Program Assessment undertaken experimentally by a teacher. But it can help the district staff also, by flagging unusually high or low costs on one specific area. And it suggests money-wise alternatives.

The Department of Education favors Supplementary Cost Analysis because it gathers fiscal facts on a spot basis, without a bunch of cluttering material. It collects information without bothering everybody in the state system. It

reduces red tape. And like loaves on the sea, the data from a single function in a single district can be funneled through the Department of Education for the benefit of all districts.

The idea is to reach into the system and isolate costs, those which are apparent *and those not normally observed.* With comparisons and experimentation on the district level, the result can be economies or better teaching—or both.

Supplementary Cost Analysis is another way of testing effectiveness and efficiency on a spot basis. It is quick, easy and useful.

Which is saying a lot for a do-it-yourself kit.

**Editor's Note: The Independent Program Assessment System is an attempt to combine a number of techniques and products developed under the Educational Research and Development Program—principally pupil assessment catalogs, cost analysis, and resources analysis. It is intended to provide comparable information of the effectiveness of a variety of educational programs. It was first field tested in 1972 and is undergoing further refinement.**

## INDEPENDENT PROGRAM ASSESSMENT FOR A PENETRATING LOOK AT EXPERIMENTATION

A little experimentation can be a very good thing.

Experimentation precedes change. And while change certainly is not all good, *progress is impossible without it.* So it was with the switch from kerosene to electric lighting, so it is with education.

The thrust of the Independent Program Assessment is to encourage experimentation and self-evaluation by teachers in the classroom. If the new procedures work, so much the better. If they fail, we have learned something ourselves.

At the moment, this is a very modest program to encourage experimentation. It is voluntary, and 300 schools offered to participate on a non-cost basis. Twelve schools and 40 teachers were chosen for the initial effort.

These 40 teachers picked the courses they wanted to assess, the time span, the depth, and the objectives. They kept a diary of time expended in and out of school, the resources used, of classroom activities. The costs were cranked in. And the results were checked with testing before and after.

It is, in short, *an on-going self-analysis instructional assessment by the teacher.* It occurs in the most basic laboratories, the classroom. It is a non-threatening sort of assessment, the most valuable assessment of all.

There are, of course, variations which can be applied to the basic approach. These can include third party audits to check procedures, third party assessments to make evaluations. They can be controlled by departments, schools, districts, and the state or federal government. The activities to be evaluated can range widely. The data can be accumulated from a variety of sources.

But these can be very costly in time, money and effort. Without such expenditure, the Independent Program Assessment permitted 40 teachers to take a penetrating look at what transpired in their own classrooms. But it does not end in those classrooms, because a successful experiment works within a system like yeast in dough.

Independent Program Assessment is not yet packaged and available for either teachers or districts. That will take time, research and money. But some day, it will be a voluntary component of accountability statewide to assess *classes, programs and curricula.* It also can be used by the Department of Education for selected analysis.

It is only the whisper of a promise now, but it's coming. The encouragement of experimentation is a valid exercise, because it hones the cutting edge of change.

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FLOYD T. CHRISTIAN
COMMISSIONER

This public document was promulgated at an annual cost of $1,484.70 or 14 cents per copy to provide both the general citizenry and professional educators a non-technical explanation of the concept and total program of accountability in Florida education.